WHAT IS CLAIMED IS:

1. A data exchange unit for communicating with a counterpart unit through a transmission line using, as a unit, a packet including header and data fields, the exchange unit comprising:

a transmission buffer;

a reception buffer;

a transmission-reception buffer;

a transmission filter for selectively storing a packet to be transmitted on either the transmission buffer or the transmission-reception buffer depending on the contents of the packet to be transmitted;

a reception filter for selectively storing a received packet on either the reception buffer or the transmission-reception buffer depending on the contents of the received packet;

a packet processor for making a packet containing information to be transmitted or fetching necessary information from the received packet;

a transceiver for converting the packet that has been stored on the transmission buffer or the transmission-reception buffer into an electrical signal to be transmitted through the transmission line or converting another electrical signal received through the transmission line into the packet that will be stored on the reception buffer or the

transmission-reception buffer; and

a central processing unit for activating the packet processor,

wherein if a response packet paired with a request packet has been received, then the reception filter stores the response packet received on the transmission-reception buffer and informs the packet processor of response detected, and

wherein if any other response packet has been received in response to the request packet, then the reception filter stores the received packet on the reception buffer and issues a suspension instruction to the packet processor.

2. The data exchange unit of Claim 1, wherein the packet processor comprises:

a request packet counter for counting the number of request packets provided to the transmission filter;

a response packet counter for counting the number of response packets that have been read out from the transmission-reception buffer; and

a suspension controller for instructing to stop making new request packets and to inform the central processing unit of completion of suspension when a count of the response packet counter matches that of the request packet counter in accordance with the suspension instruction.

3. The data exchange unit of Claim 2, wherein the packet processor further includes means for accepting a data exchange reboot instruction from the central processing unit after the central processing unit has been informed of the completion of suspension.

4. A data exchange unit for communicating with a counterpart unit through a transmission line using, as a unit, a packet including header and data fields, the exchange unit comprising:

a transmission buffer;

a reception buffer;

a transmission-reception buffer;

a transmission filter for selectively storing a packet to be transmitted on either the transmission buffer or the transmission-reception buffer depending on the contents of the packet to be transmitted;

a reception filter for selectively storing a received packet on either the reception buffer or the transmission-reception buffer depending on the contents of the received packet;

a packet processor for making a packet containing information to be transmitted or fetching necessary information from the received packet;

a transceiver for converting the packet that has been

stored on the transmission buffer or the transmission-reception buffer into an electrical signal to be transmitted through the transmission line or converting another electrical signal received through the transmission line into the packet that will be stored on the reception buffer or the transmission-reception buffer;

a page table memory for storing page table data, the page table data being used for indirectly addressing a memory location in the counterpart unit;

a packet transmission controller for controlling the packet processor; and

a central processing unit for activating the packet transmission controller,

wherein if the central processing unit has received a request for transferring data using a page table by way of the reception buffer and has activated the packet transmission controller, then the packet transmission controller instructs the packet processor to make a request packet for acquiring the page table data from the counterpart unit, and

wherein after the packet processor has acquired the page table data by way of the transmission-reception buffer, the packet transmission controller stores the page table data on the page table memory, and then instructs the packet processor to make another request packet requesting an access to a memory location in the counterpart unit that has been

specified by the page table data stored on the page table memory.